The Fake Meat Scam

Eating renewable ecosystems as a healthy alternative for restored meat, the industry's false claim that it's sustainable, and the dangers of GLP-1s and boosters of ultra-processed ingredients designed to look as much like meat as possible.

By Dr. Joseph Mercola

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Story at a glance

- Ultra-processed foods typically have four or more ingredients, many of which are not found in traditional foods, such as fake meat. The Impossible Burger and Beyond Burger, including fake blood processed from genetically engineered yeast to mimic the taste and texture of real beef
- Although the ingredients used to make fake meat are generally recognized as safe, a number of studies have found that they can cause harm. Research on fake meat labs on the products' safety. However, tests on lab rats showed the animals' blood chemistry, the company did not follow up on the results
- The parent companies for Impossible Burger and Beyond Burger spearheaded a campaign to get lab-grown meat approved for human consumption against typical conventional animal farming practices (CAFO) and plant production. Not surprisingly, they found their product had a lower impact, but the study was based on a comparison to CAFO beef, which is the worst option when comparing farming practices to produce natural beef products
- If a plant-based, genetically engineered (GE) meat alternative is not enough to convince consumers to switch, the industry is also pushing to get GE meat from cells with cow cell lines. GE meat is also touted as a solution to the ethical issues of fake cell lines, but whether hybrid management improves the environment is yet to be seen from its real-world success

The junk food industry has a new product they are offering in exchange for your health and money.

Using strategies in practice in a machine that's been perfected for decades, they're selling you a fake food that's engineered to look as much like real food as possible.

In an effort to get you hooked on it, it's marketed as healthier and [better for the environment](https://www.beyondmeat.com/en-US/about-us/) — a ploy that has worked to earning good favor within pretending your local air and water supplies.

The fake meat industry is an ultra-processed foods fraud in nature that [requires genetically engineered "blood"](https://www.beyondmeat.com/en-US/about-us/) for their fake meat products.

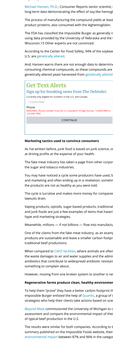
Food critics who are tasked to deal with some finding the texture bizarre, but [not tasting like a burger.](https://www.theguardian.com/food/2019/jun/07/the-impossible-burger-is-not-for-vegetarians-its-for-people-who-love-meat) Others say that only when the burger is piled high with condiments and toppings can you get it tasted and taste like the real thing — [a questionable endorsement.](https://www.theguardian.com/food/2019/jun/07/the-impossible-burger-is-not-for-vegetarians-its-for-people-who-love-meat)

When it comes to organic offerings, food manufacturers would like you to believe they can produce organic fake meat, but that's not only impossible, it's impossible to achieve.

Even if you think [ultra-processed foods](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) are worthy trade in the junk food aisle, though, it's important to know what's in them. Ingredients of ultra-processed foods, Nutrition, many foods you eat most likely include fake meat ingredients:

"Beside salt, sugar, oils, and fats, ingredients of ultra-processed foods include food substances not commonly used in culinary preparations, such as hydrogenated oils, modified starches, and additives whose sole purpose is to enhance sensory qualities.

"Additives whose purpose is to imitate sensorial qualities of unprocessed or minimally processed foods and their culinary preparations are a major, undesirable qualities of the final product, such as colorants, flavorings, emulsifiers, and thickeners, and processing auxiliaries, including bulking, de-foaming, anti-caking, and glazing agents."



Health is not driving a meat makeover

The Heart and Stroke Foundation of Canada warns you should not be swayed by fake meat's marketing using words such as "healthy" and "natural" when you make food choices.

Unfortunately, it appears that some consumers believe the advertising promises.

While [a plant-based meat alternative,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) Beyond Burgers and Impossible Burgers are considered ultra-processed combination of chemicals, processed by putting grains in a factory and a few other processed concentrates.

Surprisingly, regenerative American and Consumer Reports nutritionists, however:

> ... while its starting materials may be plants, the main ingredients are all highly processed concentrates, oils, and flavors. If you want the full health benefits of plants, eat them as whole foods with their nutrients and their naturally occurring fiber.

Adding to the discussion, both [Impossible Burger and Beyond Burger](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) have been found to contain [soy leghemoglobin](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/), a genetically engineered ingredient. In addition, both also have much more processed sodium content.

As a reporter at NBC News so succinctly pointed out:

> "If eating more nutrition has ever been about health, the offerings would be more like a bowl of vegetables than a bowl of processed meat. It's not about fat. None of them do, because the point was never to live up to the marketing of healthier eating. It was to simply act as a smooth replacement for the meat we worried about eating for our health and the planet."

However, fake meat manufacturers have rushed in the laboratory to boost profits and drive sales rather than support sustainable and environmentally friendly new food production.

Chemical-packed fake meat contains GE blood

After they mimicked the look and texture of meat, manufacturers gave consumers the taste and odor of blood using a compound produced by [genetically engineered yeast cells.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/)

The compound is called [soy leghemoglobin,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) coming from the roots of the soybean plant.

On a chemical level, it's similar to the iron-rich molecule found in mammal blood and it adds some of the texture and bloody look of an all-beef patty.

But manufacturing it to scale is impossible with just soybeans — it takes one full acre of soybeans to produce 1 lb of leghemoglobin.

First, it requires genetic work in the lab to insert the soy leghemoglobin into genetically engineered yeast. The yeast is then fermented in a way that mimics [sugar fermentation,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) in dozens or dozens of other chemicals.

Impossible Burger's scientists fed the leghemoglobin to rats for 28 days to determine the risk of allergic reaction or toxicity.

[Diane Parks,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) from Impossible Foods, pointed out that the rats exhibited alterations in blood chemistry, which the company did not follow up on.

Unfortunately, the U.S. Food and Drug Administration (FDA) only requires [Impossible Foods](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) to demonstrate blood safety and does not require any independent research.

[Michael Hansen, Ph.D.,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) Consumer Reports senior scientist, notes there is no long-term data demonstrating the effect of the ingredient in the human body.

The process of manufacturing the compound yields at least another 40 by-product proteins, also consumed with the leghemoglobin.

The FDA has classified the Impossible Burger as generally recognized as safe (GRAS) by using the consultancy of Nestosa and the University of Wisconsin-Madison's Food Research Institute.

According to the Center for Food Safety, each of the soybean crops grown in the U.S. are [genetically engineered.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/)

Critics say that there are not enough data to determine human safety when consuming chemical compounds, as they compounds are produced from genetically altered yeast harvested from [genetically altered soybean](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/).

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Marketing tactics used to convince consumers

As he writer before, junk food is based on junk science, or information aimed at selling junk food at the expense of your health.

The fake meat industry is no different, using from other corporate interests such as the sugar and tobacco industries.

You may have noticed a cycle some producers have used, beginning with hype and marketing and often ending up in a scandal. Consumers are left to pay for the products are not as healthy as you were led.

The cycle is lucrative and makes more money for companies than subsequent lawsuits drain.

Vaping products, opioids, sugar-based products, traditional cigars and cigarettes, junk foods are just a few examples of items that haven't lived up to the hype and marketing strategies.

Meanwhile, millions — if not billions — flow into manufacturers' pockets.

One of the claims from the fake meat industry, as an example, is that their products are sustainable and leave a smaller carbon footprint than that of traditional animal agriculture.

When compared to [CAFO farms,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) where animals are often treated inhumanely, the exotic damages to air and water supplies and the administration of antibiotics that contribute to widespread antibiotic resistance, this may be something to complain about.

However, moving from one broken system to another is never the answer.

Regenerative farms produce clean, healthy environments

To help them "prove" they have a better carbon footprint than the animal farms, Impossible Burger enlisted the help of [Quantis,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) a group of scientists and strategists who help them devise methods to support their claims of sustainability.

[Reports that](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) commissioned the University of Michigan to conduct an independent life cycle assessment, which found that fake meat produces 89% less of typical beef production than it.

The results were similar for both companies. According to the executive summary published on the Impossible Foods website, their product reduced [environmental impact](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) between 87% and 96% in the categories studied, including global warming potential, land occupation and water consumption.

In response, White Oak Pastures in Bluffton, Georgia, commissioned the same study, but with a regenerative farm. The study found [regenerative farms](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) like White Oak Pastures emissions against conventional beef production.

While the manufactured fake meat reduced its carbon footprint up to 96% in some categories, White Oaks had no net emission in the negative numbers as compared to CAFO-produced meat.

The key ingredient?

Also of note, emissions for producing beef at White Oaks Pastures was much lower than the industry average, which is why it was used as the basis for beef burgers and hamburgers.

Quantis also found that White Oaks Pastures beef bills within and even below the range of production of other types of protein sources, including beef, pork, chicken and soybeans.

Additionally, emissions by White Oaks Pastures included a large negative soil carbon sequestration, which he explained in many articles is essential to protecting against air pollution and climate change.

Speaking to Consumer Reports, friends of the Earth's Pete added that the Hope Impossible Burger's environmental impact is not as low as claimed. "Their better solution is environmental problems, and indeed the [true costs of producing fake meat](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) cannot even count it's being produced on a large scale.

These costs include damage to your health as well as to the environment. Rather than creating new products that require more energy, more money, and more environmental damage, why not invest in a truly sustainable system?

'Plant-based' not enough — others 'growing' meat in labs

Instead of creating plant-based alternatives laced with more molecules, more, the promise of blood is not enough of a science fiction adventure, it's been the next scientific frontier to "fix what is wrong" meat in the lab to [work with cultures.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/)

In 2000, fake meat scientists in Tel Aviv to report on the story and had to sign a confidentiality agreement to enter the "mines."

CEO of Aleph Farms, [Didier Toubia,](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) told the crew he believes they can produce meat efficiently, more sustainably and in a way that is more ethical than traditionally offered.

When the CBS reporter commented on the "delicate portrait of meat" served to him, appearing in the slides to be no more than a thinly-sliced, 1-inch square, unremarkable piece of beef.

Several other companies are jumping on the bandwagon, though, including Memphis Meats, Future Meats Meats for beef and chicken, and Finless Foods and Wild Type for fish.

Memphis Meats' leadership believes their controlled production environment may reduce the risk of bacterial contamination.

But Hansen, a senior scientist at Consumer Reports, points out that "bacterial contamination can occur" in laboratory environments and "infections are also often needed to curb bacterial growth in cultured cell products from drug companies."

At this point, [no end-product exists](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) is not available to the market. Yet, a New York-based research director focused on cellular agriculture, says it may be "fun to do even before [product] launch are available and a decade or more before we see cow steaks," in the grocery store.

Choose grass-fed, not genetically altered beef

Although many see GE-created meat substitutes as the lesser of two evils when compared to CAFO beef production, there is a third option that is healthier for the natural order of the lifecycle is not the answer.

Analysis [pro-regenerative agriculture](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) have demonstrated holistic herd management as having a [positive impact on the environment](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) and producing healthy meat and dairy products.

Ultimately, fake food contributes to the rising number of people who suffer from health conditions related to the foods they eat, such as diabetes, [heart disease](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) and obesity.

For health reasons, ecological reasons and your future, I recommend skipping fake meat alternatives and opting for real food raised using [regenerative farming](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6187570/) practices.

When you do shop for meat, look for a local organic farmer or Demeter Biodynamic and American Grassfed Association certifications on the label.

These accreditations designate foods produced under high-quality, sustainable and environmentally sound practices.

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The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views of Children's Health Defense.

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If you eat nothing but animal foods you'll die fast from scurvy and other preventable diseases. Excess fat and protein in the diet destroy people's health. Farming plants isn't harmful to animals or the environment. It's bad agricultural practices such as the use of pesticides, GMOs, monocrops and animals kept in cages on factory farms, fed antibiotics and growth hormones and injected with vaccines that are harmful to the planet and to animals. You also have to kill tons of animals to keep people eating meat. Organic regenerative practices used by ethical farmers benefit animals and the environment. Leave the production of meat for people's carnivorous pets who need it.

3 | 1 · Reply · Share ›

Ty Shlackman → LouRich · 25 days ago

You can't get any phytochemical compounds on an animal based diet which are needed to modulate the immune system, cleanse and detoxify and stop oxidation caused by toxins, pathogens and free radical molecules. Animal foods have very few nutrients and the ones they do have can't be absorbed well because the high fat content in animal foods causes insulin resistance.

2 | 1 · Reply · Share ›

blessthebeasts → LouRich · 25 days ago · edited

If you use your head and some basic arithmetic, you'll realize that most of the crops grown around the planet are fed to livestock. So if you really care about those rodents killed, you'll stop eating the animals those crops are fed to. BTW, it takes 10 times as much water to produce a pound of beef than a pound of grain. It takes 100 times more than growing an avocado. If you really care about conserving water.....

1 | 2 · Reply · Share ›

tag → Marco Chiesa · 25 days ago

So what are you going to do with all these "abused" animals. Most vegans think they should be killed to eliminate their suffering. HUH? If that your answer, kiss off your dogs and cats as they are all carnivores and no matter how bad you want them to be vegan, you'll kill them anyway. What about the cultures that totally rely on animal protein? Are you willing to take responsibility for eliminating millions world wide so you can have a feel good moment? I really have a short fuse for posters that think they have all the answers and post nonsense without ever looking at all aspects. What you might want to do is switch your "fix the world" to CAFO's. That is where the abuse is. There are many, many farmers that treat their animals right and with respect.; God put these animals here for a reason. Pick up the book!

1 | 2 · Reply · Share ›

tag → tag · 22 days ago

To bless the beast who down votes but has no answer. How typical and fickle is that. You got all the answers? Bring them on! Have to start by thinking with your head and common sense and not your emotions. And as far as blessing the beast? Bet you never grew up with a much loved family milk cow. Abbey was her name. Chickens? Naw. Had horses for 30 years? Naw. I have worked with animal, all kinds of animals since my first job at 3 years old gathering eggs and holding the milk buckets for baby cows. I have been a pet groomer for 50 years, had 2 boarding kennel facilities, worked in Veterinary field and had a kitten rescue for 3 years. This rescue only took in feral kittens withing a 5 mile radius of my home and in 3 years found homes for 150 kittens, all altered and vaccinated at my expense. Ever some surgeries to save their lives! . Also for 25 years sold hand made pet products world wide. All of these years was in the same town so if abusive don't ya think I would have been prosecuted by now? SO tell me bless, what have you done besides run your mouth?

1 | 2 · Reply · Share ›

TellTheTruth-2 · 20 days ago

The very thought of fake meat is disgusting. Sadly, I suspect before it's over they won't have to tell us it's fake.

2 · Reply · Share ›

Sustainer · 25 days ago

Milk, too. I keep seeing ads on Facebook for "vegan cow milk" products. Vegan because it isn't squeezed out of a cow, but cow milk because it's produced using cow DNA. So messed up!

2 · Reply · Share ›

tag → Sustainer · 22 days ago · edited

Vegan milk? when's the last time you milked a plant? Are the vegans against breast feeding their children? Milk from nuts and soy? How yummy! Grass fed raw milk from a Cow... Bad...GMO's with a dose of roundup is Good? No wonder our kids are sick with issues that were never even heard of when I grew up. They have parents that are already living in the Meta Verse.

· Reply · Share ›

tag · 25 days ago

I'll stick with my grass fed animal products purchased from a regenerative farmer and my own garden where i grow all kinds of beans, carrots, radishes, peas, potatoes, onions, garlic, tomatos, peppers, beets, greens, cucumbers, melons and all kinds of herbs. All summer long i haul in food including about 2 doz a day fresh eggs. I can, freeze, dry store and also save my seed for the following year. i do this on 2 acres and don't rely on a grocery store all winter and I would quit eating meat if the fake garbage was all I could get. Eat REAL food and ditch the highly processed garbage. Your health issues will improve. Pay a farmer or pay the insurance companies, the hospital and the MD. Trust me, the farmer works cheaper.

2 · Reply · Share ›

PrudentGrace · a month ago

Not to defend Beyond processed food products but to clarify the misinformation found in this article, Beyond is made without GMOs, soy, or gluten

3 | 1 · Reply · Share ›

EJ → PrudentGrace · a month ago

Most canola oil is gmo and the plants used are not specified as organic. (and of course it's major owners are Blackrock & Vanguard...)

3 | 1 · Reply · Share ›

tag → EJ · 22 days ago

People need to get an education to what labels really mean. Free range? A few square feet that the lot of 1000 animals will never see. Labels are pure propaganda, used to buy the emotionally driven flock. find a local farmer where you can actually visit the farm or grow your own. Same thing with the organic label.

1 · Reply · Share ›

Chris → PrudentGrace · a month ago

Thank you for pointing out some major misinformation in this article.

1 · Reply · Share ›

Angela AngelaAngela · 25 days ago

Killing animals for food when you have healthy whole food plant-based options is absolutely cruel and wrong. The Whopper is not healthy. Impossible Burger and Beyond Meat provide a more ethical option with an equivalent health outcome. They are not worse than a Whopper health-wise. These products are for people who want the flavor and the fast food experience. A whole food plant-based diet is both healthy and more ethical than eating any kind of meat. Please stop killing and eating the tortured remains of innocent animals when you DO NOT HAVE TO.

2 | 2 · Reply · Share ›

tag → Angela AngelaAngela · 22 days ago · edited

Bot alert! Please read my post on the subject. You have been so deceived. Going to make your dog a vegan? Kiss that pup goodby.

1 · Reply · Share ›

mcwinaz · a month ago

NO thanks on the 'real' beef. I am a vegetarian, moving towards veganism, and have no desire to eat something that has a face, feels pain/fear, and has a mother/father.

1 | 3 · Reply · Share ›

Chris → mcwinaz · a month ago

Bravo!

1 · Reply · Share ›

tag → mcwinaz · 25 days ago

Wait. Embryo's have a face and a mother and father. So saying the fake garbage fits your needs?

· Reply · Share ›

mcwinaz → tag · 25 days ago

'Tag' - you are combative on every post from people who are not meat eaters. It is a choice, just as yours is to eat meat. Try to be a little more respectful on your posts.

1 | 2 · Reply · Share ›

tag → mcwinaz · 25 days ago

Try to post something using your intelligence instead of your emotions. I have no problem if you don't want to eat meat but you also need to accept we are not all abusers. And you have no idea how many people that would die if livestock was eliminated from the human diet. Please stop with your opinion until you are willing to look at all angles, not just your own.

1 | 2 · Reply · Share ›

mcwinaz → tag · 16 days ago

Stop with my opinion? With that statement, I think you'll find more friends on the censored sites, not CHD.

| 2 · Reply · Share ›

tag → mcwinaz · 13 days ago

Might try to appreciate the ones that are trying to set your mind straight again. Not my opinion but if your did some simple research would figure out it is fact. Eat the lies if you must but stop with criticizing the people that HAVE done the research.

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Freedom 4 All → tag · 12 days ago

What's your take on "The Carnivore Test"?

· Reply · Share ›

Ninsuna · 19 days ago

I've been vegetarian since 1965 at age 14. A year or so ago, someone gave me a package of "Beyond Beef" and I tried it.

After one bite, I immediately vomited in my kitchen trash can! And I've always had a strong stomach. Black bean burgers and soy burgers never made me vomit. Real meat never made me vomit back when I ate it.

I knew immediately something is really wrong with this new "fake meat" garbage.

· Reply · Share ›

DubbyD · a month ago

There's a good documentary about this subject called Beyond Impossible on Tubi. Worth watching.

· Reply · Share ›

Voyt Regnal · a month ago

..."your best choice is to seek food from natural sources."
Then let us eat bugs...🤦‍♂️🤨

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DubbyD → Voyt Regnal · a month ago

Not really a natural source of food for most people.

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